

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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SERIAL NO.: 10/762,736 ART UNIT: 2621
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TITLE: METHOD FOR ENCODING AND DECODING VIDEO
 INFORMATION, A MOTION COMPENSATED VIDEO ENCODER
 AND A CORRESPONDING DECODER
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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Review is respectfully requested for the reasons stated below:

1. Applicants respectfully submit that claims 33-41 are patentable over the combination of Nieweglowski et al. (WO 97/16025, "Nieweglowski") and Yagasaki et al. (US 5,428,396, "Yagasaki") under 35 USC 103(a).

The current claim 33 discloses:

A method for decoding encoded video information, the method comprising:

determining, via a decoder, a prediction error quantizer from encoded video information, the prediction error quantizer used to quantize prediction error transform coefficients; and wherein the decoder further provides the functions of:

determining an accuracy of motion coefficients based on the prediction error quantizer, the motion coefficients representing the motion of a picture segment; and

decoding encoded video information into an image based on the prediction error quantizer and the accuracy of the motion coefficients."

Independent claims 37 and 39 recite similar subject matter.

In Nieweglowski, motion coefficients are only transmitted from the encoder to the decoder, and Nieweglowski is silent regarding specifying in the decoder the accuracy of the motion coefficients on the grounds of the prediction error Quantizer that is selected in the same decoder. Thus, Nieweglowski lacks the feature of *"determining [via the decoder,] an accuracy of motion coefficients based on the prediction error quantizer, the motion coefficients representing the motion of a picture segment"*.

In addition, Nieweglowski fails to teach that the video is decoded in the decoder on the basis of the prediction error quantizer selected in the detector and the accuracy of the motion coefficients specified on the grounds of said prediction error quantizer in the detector. Page 2 of Nieweglowski describes adding the decoded prediction error to a prediction frame to obtain the original frame but makes no mention of using the accuracy of the motion coefficients. In contrast, the present claims decode video information based on both the prediction error and the accuracy of motion coefficients based on the prediction error. Therefore, Nieweglowski lacks the feature of *"decoding [via the decoder,] encoded video information into an image based on the prediction error quantizer and the accuracy of the motion coefficients"*.

According to the above, Nieweglowski does not disclose or suggest all the features of the method of current claim 33.

Yagasaki fails to provide the elements of the independent claims missing from Nieweglowski. In particular, Yagasaki does not determine "an accuracy of motion coefficients based on the prediction error quantizer, the motion coefficients representing the motion of a picture segment" of present claim 33. Yagasaki discloses control and reference signals S54 and S55 that are motion vector degree of accuracy signals. These signals are supplied to a motion compensator 22, and are used to determine which entry of a variable length coding table is used to encode motion vectors (see column 12, lines 36-51). These signals are not used to determine the accuracy of motion coefficients based on a prediction error quantizer, but instead are used to select a code for encoding a motion vector in order to achieve a particular motion vector accuracy, for example 0.5 picture elements.

Yagasaki also fails to disclose or suggest decoding encoded video information into an image based on the prediction error quantizer and the accuracy of the motion coefficients. Because Yagasaki fails to determine "an accuracy of motion coefficients based on the prediction error quantizer," Yagasaki cannot decode encoded video information into an image based on the prediction error quantizer and the accuracy of the motion coefficients.

Because neither Nieweglowski nor Yagasaki disclose or suggest these two features of the present claims, the combination of Nieweglowski and Yagasaki fails to disclose or suggest all the features of the independent claims and fail to render the claims unpatentable.

The embodiments taught by the present claims provide the ability to modify the accuracy with which both the prediction error information and the motion information is encoded and transmitted, when a quality of a target image changes. Hence, the present embodiments enable a good overall coding performance for each image quality or transmission bit rate.

It should be noted that in reality there is no teaching or suggestion to combine the references of Yagasaki with Nieweglowski, which is required according to *In re Dembiczak*. Especially when signal S54 or S55, which represents the degree of accuracy of the motion vector, is supplied to arithmetic circuit 1 of hybrid encoder 8 of moving picture coding apparatus in Yagasaki, whereupon the final result of the hypothetical combination of the teachings still lacks the same two aforesaid features.

Therefore, the final result of the hypothetical combination of the teachings of Nieweglowski and Yagasaki fails to disclose or suggest all the features of the present claims.

If the examiner feels otherwise, the applicant wants to respectfully request the examiner to point to specific principle that would suggest such a combination and modification. Due to *In re Lee* such a specific principle must be shown for a rejection under 35 USC § 103 to be sustained.


At least for these reasons, the combination of Nieweglowski and Yagasaki fails to render claims 33-41 unpatentable.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully

requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

The Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,



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24 Feb 2010
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